governs pulmonary and tissue respiration. Also, that the pituitary body regulates the functions of the thyroid and para-thyroid, the nerves from the pituitary body to these organs having been discovered by Cyon, who showed that they cause dilatation of the thyroidal vessels, thus increasing their functional activity.

R. L. J.

THE HEART IN PULMONARY TUBERCULOSIS.

THE HEART ITSELF NOT DISEASED.

(Lawrason Brown, M.D., the *American Journal of Medical Sciences*, Vol. 136, Dec., 1908.)

The study of the heart gives much information as to the diagnosis, prognosis and treatment in pulmonary tuberculosis. Brown takes up the following points: (1) The position of the heart; (2) the size of the heart; (3) dilatation of the heart; (4) auscultatory phenomena; (5) the pulse, mentioning briefly blood pressure; (6) palpitation.

The position depends directly upon the pathological changes that have taken place in the lungs. In the incipient stages the heart is displaced very little, while in far advanced stages there is some change in the position. The displacement may be more pronounced when the right lung is involved because it is most often associated with contraction of the lung; even when the apex is involved there may be a displacement to the right for one-half inch. This, Turban considers "a typical and cardinal symptom." Pulmonary tuberculosis is by far the most frequent cause of non-congenital dextrocardia. This displacement may take place suddenly or gradually. Marked displacement of the heart takes place much more frequently to the left than right, due possibly to the more direct tension on the heart during contraction; the apex may be beyond the left anterior axillary line, or in the third intercostal space.

The size of the heart is said to be small, large or normal in pulmonary tuberculosis; the small heart being explained by many theories, as poor appetite, impoverished nutrition, cachexia, atrophy or degeneration of the heart substance, lessened amount of blood and fewer erythrocytes, or to several of these factors. Norris thinks that in uncomplicated pulmonary tuberculosis the heart is often subnormal in size, due to atrophy of its substance, and not to congenital hypoplasia.

The factors occurring in pulmonary tuberculosis and leading to hypertrophy are pleural adhesions, emphysema, a reduced capillary area, or possible to marked infiltration and complications, such as nephritis, arteriosclerosis, etc.; some attribute it to alcohol or nephritis. Palhier believes that hypertrophy occurs only when pathological changes are found elsewhere in the body. Reuter found enlarged heart in 40 per cent. of men and in 20 per cent. of women. Woods Hutchinson has shown that all classes of animals with a relatively small heart in proportion to the body weight are very susceptible to tuberculosis, while those with proportionately large hearts are almost immune. Variations from the normal size is much more apt to occur in the later stages of the disease. In the progress of the disease the heart may atrophy, hypertrophy or remain normal in size.

Dilatation has been found more in acute types of the disease, especially in those with chronic fibroid changes. Occurs frequently in acute miliary tuberculosis, due to the impeded pulmonary circulation. Dilatation of the right side, both auricle and ventricle, often accompanied by hypertrophy of the right ventricle, which Jaccoud believes is favorable. The area of cardiac dullness was rarely changed in 1289 patients at the Adirondack Cottage Sanitarium unless some valvular disease was present.

Careful auscultation reveals, in a certain proportion of patients, some deviation from normal. Flick and his fellow-workers lay stress on the frequency of accentuation of the second pulmonic sound. A weakened first sound is rather frequent in well-advanced stages. Irregularity in the heart action and the skip of a beat is infrequent in early stages and apparently less common in late stages.

The frequency and tension of the pulse in pulmonary tuberculosis are early and often changed. The pulse in this disease is almost as important as the temperature, and in many cases is far more accurate for prognosis. The increased frequency most often stands in direct relation to the activity and extent of the disease and strength of the patient. The most probable cause of increased frequency of pulse rate, especially in incipient stages, is a weakened condition of the cardiac muscle and its nervous control, due to the tuberculous toxin, but this hardly explains the tachycardia in some healed lesions. The blood pressure is lowered from the outset, with a marked variation in a reclining and an upright position. Many believe the lowered tension is due to the tuberculin. When complicated by nephritis, emphysema, arterio-sclerosis, diabetes or cardiac hypertrophy, the blood pressure may be raised. It is a rare thing for patient to complain of palpitation in the early stages.

O. N. B.

THE SENSE OF WEIGHT IN THE AFFECTED SIDE: ITS VALUE IN THE DIAGNOSIS OF LOBAR PNEUMONIA.

(Thomas F. Reilly, Professor of Applied Therapeutics, Fordham University, *Archives of Diagnosis,* Oct., 1908.)

The diagnosis of a fully developed pneumonia is generally very easy, but cases exist in which we are in doubt for two or three days, or even during the entire course. This is especially marked when in the absence of the characteristic sputa, we are dealing with a so-called central pneumonia. In such a case an absolute diagnosis is impossible; yet, with the concomitant signs of irritative cough, chill, temperature and disturbed respirative ratio, we may often feel sure in our diagnosis.

Aufrecht, quoting Eichhorst, mentions a case in which the left lung weighed four pounds more than the right, which was normal.

Taking the statistics of Ballinger, Eichhorst and Kussmaul, there is an average increase in weight of two pounds and three ounces in the affected lung.

In most cases he finds that as soon as the sensation of acute pain due to the accompanying plural affection has passed off, most patients complain of a feeling of weight, or load, on the affected side. Frequently it is only on sitting upright or lying partly on the sound side that the weight is apparent.

In thirty cases he succeeded in eliciting this symptom in twenty-one, before the fourth day.

W. M. McC.

THE CLINICAL SIGNIFICANCE OF SUB-NORMAL TEMPERATURE.

A BRIEF RESUME OF THE LITERATURE FROM 1903 TO 1908.

(L. Bertram Sachs, *Archives of Diagnosis,* Oct., 1908.)

Considerable attention has been paid to the subject of pyrexia, but the study of subnormal temperature has been neglected. The source of the body heat is the oxidation of food, and the nervous system balances heat productions against heat loss through the regulation of the vasomotor system. In other words, the temperature of the body is the temperature of the blood.